

patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." [emphasis added] That is, to have any expectation of rejecting the claims over a single reference or a combination of references, each limitation must be taught somewhere in the applied prior art. If limitations are not found in any of the applied prior art, the rejection cannot stand. In this case, the single applied prior art reference clearly does not arguably teach some limitations of the claims.

Claim 1 recites in part:

"a first bump interconnect extending from the first supported-structure interconnect location of each of the microelectronic integrated circuits to the first region of its respective supported element, and
a second bump interconnect extending from the second supported-structure interconnect location of each of the microelectronic integrated circuits to the second region of its respective supported element."

If Applicant understands the explanation of the rejection, the portion of Ozaki that is read upon the claimed "first region" is the n-type layer 3, and the portion of Ozaki that is read upon the claimed "second region is the p-type layer 2. Applicant certainly agrees that there is a "second bump" 8 interconnect extending to the p-type layer 2, as shown in Figure 2(c) of Ozaki.

But there is no "...first bump interconnect extending...to the first region..." as recited in claim 1. The n-type layer 3 is not even shown in Figure 2(c) of Ozaki, so none of the bumps 8 or 8A or 8B can extend to the n-type layer 3. The responsive argument at page 10, lines 13-18 of the present Office Action is a construct that is unsupported in the facts. There is no disclosure or illustration suggesting that any of the bumps 8, 8A, or 8B extend to, contact, reach or otherwise have any relation to the n-type layer 3. The response asserts that the bump 8 "simply reaches the area of the

first region", but a look at Figure 2(c) tells you it doesn't--nothing suggests that any of the bumps 8 reach the n-type layer 3.

"Extend" means "to reach, as to a particular point". The claim language recites the particular points: "a first bump interconnect extending from the first supported-structure interconnect location...to the first region of its respective supported element". "Reach" means "to succeed in touching", or "to stretch or extend so as to touch or meet" (All definitions set forth herein are evidentiary submissions from Webster's Unabridged Dictionary of the English Language, Portland House, 1989, appropriate pages attached). The first bump 8 never touches the n-type layer 3 in Ozaki. It touches the p-type layer 2, but never the n-type layer 3. The bump 8 never extends to the n-type layer 3 under any formal or common-sense definition or concept.

The reliance on "well known" technology continues, and Applicant repeats its request of the prior Amendment. The present Office Action mentions but does not apply the Bryan '547 reference. Because this reference is not applied in forming the rejection, it cannot be relied upon in support of the rejection or in support of the "well known" argument. If it were acceptable to rely on a reference that is not applied in forming the rejection, then it would never be necessary to cite the pertinent prior art so that the propriety of applying that art could be examined according to the applicable legal principles.

Applicant asks that the Examiner reconsider and withdraw this ground of rejection.

Claims 4 and 8-23 are rejected under 35 USC 103 over Ozaki in view of Watton '256. Applicant traverses this ground of rejection.

Ozaki has been discussed above, and that discussion and the associated requests are incorporated here. These discussed points are relevant here because claim 4 depends from claim 1, and independent claims 8, 16, and 18 have similar relevant limitations and the same arguments are made in the explanations of the rejection.

Watton teaches a structure that is so different from that of Ozaki that Applicant cannot see how to interrelate their teachings. There is no "physically discontinuous"

structure in Watton. The elements indicated in the explanation of the rejection to be an "array of detector islands (5,8)" are in fact an interconnect layer 5 and electrically conducting channels or interconnect channels 8 (Watton, col. 5, lines 20-23). The electrically conducting channels 8 are holes or pores filled with an electrically conducting material (col. 5, lines 28-34). These filled holes or pores, commonly termed "vias" in the art, do not create isolated islands--they are simply holes through the otherwise continuous interconnect layer 5. They only appear to create isolated islands because the sectional view of the drawings is taken in the plane of the electrically conducting channels 8. The plan views of Figures 4-5 give a better idea of the continuous nature of the interconnect layer 5.

Thus, Applicant incorporates from the response to the first rejection the discussion of the failure of Ozaki to teach certain limitations of the claims. Watton adds nothing that would remedy these shortcomings of the teachings of the primary reference.

The present rejection seeks to perform a hindsight reconstruction based upon unrelated references, which is technically unsupported and is legally improper.

The case authority and the MPEP provide guidance on this point. The present rejection is a sec. 103 combination rejection. It is well established that a proper sec. 103 combination rejection requires more than just finding in the references the elements recited in the claim (but which was not done here). To reach a proper teaching of an article or process through a combination of references, there must be stated an objective motivation to combine the teachings of the references, not a hindsight rationalization in light of the disclosure of the specification being examined. MPEP 2143 and 2143.01. See also, for example, In re Fine, 5 USPQ2d 1596, 1598 (at headnote 1) (Fed.Cir. 1988), In re Laskowski, 10 USPQ2d 1397, 1398 (Fed.Cir. 1989), W.L. Gore & Associates v. Garlock, Inc., 220 USPQ 303, 311-313 (Fed. Cir., 1983), and Ex parte Levengood, 28 USPQ2d 1300 (Board of Appeals and Interferences, 1993); Ex parte Chicago Rawhide Manufacturing Co., 223 USPQ 351 (Board of Appeals 1984). As stated in In re Fine at 5 USPQ2d 1598:

"The PTO has the burden under section 103 to establish a prima facie case of obviousness. [citation omitted] It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references."

And, at 5 USPQ2d 1600:

"One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

Following this authority, the MPEP states that the examiner must provide such an objective basis for combining the teachings of the applied prior art. In constructing such rejections, MPEP 2143.01 provides specific instructions as to what must be shown in order to extract specific teachings from the individual references:

"Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention when there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)."

* * * * *

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)."

* * * * *

"A statement that modifications of the prior art to meet the

claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd.Pat.App.& Inter. 1993)."

Here, there is set forth no objective basis for combining the teachings of the references in the manner used by this rejection, and selecting the helpful portions from each reference while ignoring the unhelpful portions. An objective basis is one set forth in the art or which can be established by a declaration, not one that can be developed in light of the present disclosure. If the rejection is maintained, Applicant asks that the Examiner set forth the objective basis found in the references themselves for combining the teachings of the references.

This rejection is also based in part on assertions of "well known". The prior discussion and requests of this point are incorporated here. Battersby '044 is mentioned but not applied in forming the rejection, and therefore cannot be relied upon.

Applicant asks that the Examiner reconsider and withdraw this ground of rejection.

Claim 5 is rejected under 35 USC 103 over Ozaki in view of Shieh '225. Applicant traverses this ground of rejection.

Ozaki has been discussed above, and that discussion and the associated requests are incorporated here. These discussed points are relevant here because claim 5 depends from claim 1. Again, there is an improper intermixing of the teachings of the structures of Figures 2(b) and 4(b) of Ozaki. Ozaki does not provide the required basic teaching of the structure, and Shieh does not provide any helpful teaching along these lines. Shieh has no teachings relevant to either of the points of distinction of claim 1 with Ozaki.

Thus, Applicant incorporates from the response to the first rejection the discussion of the failure of Ozaki to teach certain limitations of the claims. Shieh adds nothing that would remedy these shortcomings of the teachings of the primary reference.

Applicant also incorporates the prior discussion of the need for an objective basis for combining the teachings, and the associated requests.

Applicant asks that the Examiner reconsider and withdraw this ground of rejection.

Respectfully submitted,

WILLIAM J. HAMILTON, JR. et al.

A handwritten signature in black ink, appearing to read 'William Schubert', written over a horizontal line.

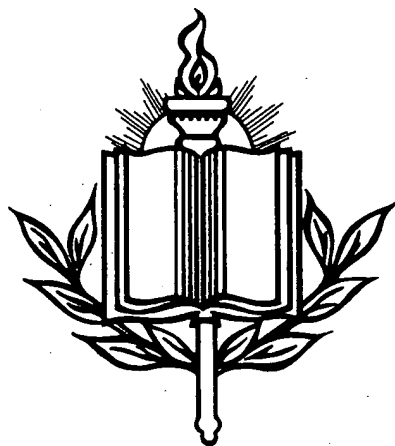
William Schubert

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Attachment:

Webster's Unabridged Dictionary of the English Language



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CONCISE ETYMOLOGY KEY: <, descended or derived from; >, whence; b., blend of, blended; c., cognate with; deriv., derivative; equiv., equivalent; imit., imitation; m., modification of; obl., oblique; r., replacing; s., stem; sp., spelling; trans., translation; ?, origin unknown, perhaps; *, hypothetical. See the full key inside the book.

Read (rd), n. 1. **George**, 1733-98. Am. leader, pres. Continental Congress 1777. **Herbert**, 1893-1968. English critic and poet. 2. **Reade**, a boy's given name.

read·a·bil·ity (rē/də bil/i tē), *n.* 1. Also **ness**, the state or quality of being **readable**. 2. **graphy**, the property of type that affects which printed matter can be read for a suit. Cf. **legibility** (def. 2). (**READABLE** + **-ITY**)

read·a·ble (rē/də bəl), *adj.* 1. easy or

read. 2. capable of being read; legible; *legible writing*. [READ¹ + -ABLE] —*read'a-bly*.
Reade (rēd), *n.* Charles, 1814–84. Engli
read-er (rē/dər), *n.* 1. a person who
schoolbook for instruction and practice
second-grade reader. 3. a person employe
evaluate manuscripts offered for publi

son who reads or recites before an audience. 5. a person authorized to read the l. etc., in a church service. 6. a lecturer, esp. in some British universities: *appointed to read English history*. 7. an assistant to a p. grades examinations, papers, etc. 8. a mark on its back so that the suit or de. the card can be identified. [*ME redere(c), redere*. See READ, -ER]

read·er·ship (rē'dər·ship'), *n.* 1. the read or are thought to read a particular paper, magazine, etc.: *The periodical has readership.* 2. the duty, status, or pre reader. 3. (esp. in British universities) instructor or lecturer. 4. the state or qui a reader: *appealing to a higher level o.*
[READER + -SHIP]
read·er·ship

read-ily (red'le), *adv.* 1. promptly; quickly. 2. The information is readily available. 3. in a manner; willingly: He readily agreed to help me. See **READY**, **-LY**

read-i-ness (red'ē nis), *n.* 1. the condition of being ready. 2. ready action or movement; quickness; ease; facility. 3. willingness; cheerfulness: a readiness to help others. *onomatopoeic* *onomatopoeic* *onomatopoeic*

reading (rē'dīng), n. 1. the action or pr who reads. 2. *Speech*, the oral interpretation of language. 3. the interpretation given in tance of a dramatic part, musical composition, or literary work. *An interesting reading of the Beethoven 5th.*

which one has read; literary knowledge: a reading. 5. matter read or for reading: *makes good reading*. 6. the form or version of a particular text: *the various readings in Shakespeare*. 7. an interpretation of a text: *What is your reading of the situation?* 8. a graduated instrument: *The barometer is 101.2°*. —adj. 9. pertaining to reading.

Reading (red/ɪŋg), *n.* 1. Rufus Daniel Marquis of, 1860–1935; Lord Chief Justice 1913–21; viceroy of India 1921–26. 2. a cit county seat of Berkshire, in S England. 119 3. a city in SE Pennsylvania. 98.177 (1960) in E Massachusetts, near Boston. 19.259 (1

read·ing chair, a chair of the 18th (designed to be sat on backwards, having a crutch that could be folded down and extended forward on both sides and supporting a book or a reading stand).

read·ing desk, 1. a desk for use in reading by a person standing. 2. a lectern in a church.

read·ing no·tice, a short advertisement placed at the bottom of a column, as on the front page of a newspaper.

read·ing room', a room set aside for
in a library or club.

re·ad·just (rē/ə just'), *v.t.* to ad·just agai
re·ar·range. [RE- + ADJUST] —**re·ad·just'**
—**re·ad·just·er**, *n.*

re·ad·just·ment (rē/ə just'/mənt), *n.* 1.
re·ad·justing or the state of being re·ad·justed.

ready (red/ē), *adj.*, **read-i-er**, **read-i-est**, *comparative*, **read-y-ing**, *n.*, *interf.* —*adj.* 1. completely prepared; fit condition for immediate action or action; **ready for battle**; **Dinner is ready**. 2. duly completed; adjusted; or arranged; **ready for action**.

purpose: *The mechanic called to say that the car was not working, willing; ready to forgive.* 4. prompt or quick in understanding, comprehending, speaking, writing, etc.: *He was prompt in responding to the question, quick in understanding the situation.* 5. prompt or quick in action, performance, etc.: *He was prompt in responding to the situation, quick in action.* 6. *a keen mind and ready wit.* 7. inclined; apt: *too ready to criticize others.* 8. in a condition as to be imminent; likely at any moment: *The storm was prompt to break.*

ready to fall. 9. immediately available
ready money. 10. pertaining to prompt pay-
ment or convenient; to lie ready to one's
et ready! (in calling the start of a race) be re-
start: Get ready! Get set! Go! 13. make re-
sponding to a state of readiness or completion
Print. to ready a press for printing. —*et. 1.*
ready; prepare. 15. ready about! Naut. 1
ack; 16. ready about. Naut. 1